Automotive Tasksheet : C807

Student/Intern Information:

Name ..... **Date** ..... **Class** .....

Vehicle used for this activity:

Make ..... **Model** .....

Year ..... **Odometer** ..... **VIN** .....

Learning objective/task:

Test pedal free travel; check power assist operation.

Recommended resource materials:

- CDX General Service
- CDX Automotive Resource Kit
- CDX *e*Textbook
- Tech service bulletins, Shop manuals, and any other information applicable to the specific vehicle or components you are working on.

Some safety issues to consider:

- Only students who have a valid driver's license and their supervisor/instructor's direct permission should perform this task due to the safety concerns involved.
- When running any vehicles in the shop, make sure you use the shop's exhaust ventilation system to discharge all exhaust gas safely outside.
- Always wear correct protective eyewear and clothing and use the appropriate safety equipment, as well as fender covers, seat protectors, and floor mat protectors.
- Make sure that you understand and observe all legislative and personal safety procedures when carrying out practical assignments. If you are unsure of what these are, ask your supervisor/instructor.

Materials required:

- Vehicle or brake system simulator

Assignment:

1. Research power booster description, operation, and testing procedure in the appropriate Service Manual.

    a. Specifications:

    b. Minimum time power booster should hold vacuum: .....

2. Test the ability of the power booster to provide assist.

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a. Without starting the vehicle, depress the brake pedal several times. This removes any vacuum from the brake booster. Hold moderate foot pressure on the brake pedal and start the engine.
NB: *The brake pedal height should drop as the engine starts and the booster multiplies pedal pressure. If the brake pedal height does not drop, the power booster system is not working.*

List your observations:

b. If the power booster is not working, follow the Service Manual procedure to determine the cause. List any necessary action/s:

3. Test the ability of the power booster to hold vacuum.

a. Without starting the vehicle, depress the brake pedal several times. This removes all vacuum from the brake booster and allows you to feel the brakes without vacuum assist.

Approximately how far down does the brake pedal go with moderate foot pressure?

.....

b. Start the engine, wait a few seconds, and depress the brake pedal once. This allows you to feel the brakes with power assist. This is how the brake pedal should respond if the power booster is holding vacuum properly.

Approximately how far down does the brake pedal travel with moderate foot pressure?

.....

c. Remove your foot from the brake pedal, turn off the engine, and wait the specified time the power booster should hold vacuum listed above.

d. After waiting the designated time, and without starting the vehicle, depress the brake pedal once and observe whether the brake pedal felt the same as in step 3.b above. List your observations:

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e. If the brake pedal responded as in step 3.b, the power booster is capable of holding vacuum and providing assist. If this is the case, no further inspection of the booster is needed.

f. If the brake pedal responded as if it had no vacuum assist, check the following conditions.

i. Verify that the proper amount of vacuum is available to the power booster.

ii. Inspect the booster for external leaks.

iii. If no external leaks can be found inspect the check valve.

List observations found:

4. Return the vehicle to beginning condition and return any tools that you may have used to their proper locations.

5. Have your supervisor/instructor verify satisfactory completion of this procedure, any observations found, and any necessary action/s recommended.

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Student's competency rating

Supervisor/instructor assessing performance marks applicable box

☐ **0 - No exposure**
No information or practise provided during the program; complete training required

☐ **1 - Exposure only**
General information provided with no practice time; close supervision needed; additional training required

☐ **2 - Limited practice**
Has practiced job during training program; additional training is required to develop skill

☐ **3 - Moderately skilled**
Has performed job independently during training program; limited additional training may be required

☐ **4 – Skilled**
Can perform job independently with no additional training

Supervisor/instructor signature ..... **Date** .....

Supervisor/instructor name .....

The tasks in this worksheet contain activities that also contribute towards the achievement of a range of educational and interdisciplinary skills. These skills are variously described by such terms as 'Core Skills', or 'Key Competencies', or 'Applied Academics'.

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